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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,662	03/16/2004	Tetsuya Kawanabe	00862.023505	4728
5514	7590	08/23/2007	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			RAHMAN, FAHMIDA	
ART UNIT		PAPER NUMBER		2116
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/800,662	KAWANABE, TETSUYA
	Examiner	Art Unit
	Fahmida Rahman	2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 November 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,3,5,6 and 8-12 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1, 3, 5-6, 8-12 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 16 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. This action is in response to communications filed on 5/8/2007.
2. Claims 1, 3, 10-12 have been amended, claims 2, 4, 7, 13, 14 have been canceled and no claims have been added. Thus, claims 1, 3, 5-6, 8-12 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 10, 11, 12 use the phrase "adapted to" which constitutes a use limitation and thus renders the claims indefinite as to what structure is embraced by the metes and bounds of the claim language. See MPEP § 2111.04.

Claims 3, 5-9 depend on claim 1 and carry the same ambiguity.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3, 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US Patent 6526516), in view of Kim (US Patent Application publication 2003/0070103), further in view of Carman (US Patent 7114078).

For claims 1, 10 and 12, Ishikawa et al teach the following limitations:

A printing apparatus (Fig 6) provided with a plurality of interface means (the three 150s) connectable to external devices (139 and 109) adapted to store image data and operated by power supplied from the printing apparatus (combination of 117, 123 and AC POWER SOURCE is the printing apparatus), with at least one of the plurality of interface means including a memory interface and at least one of the external devices including a memory (139 comprises memory to store image and the interface of 139 is therefore memory interface), the printing apparatus comprising: detection means for detecting a connection state of the external devices to the plurality of interface means (lines 31-50 of column 8); determining means for determining whether or not a total amount of power that the external devices demand exceeds an amount of power that the printing apparatus is capable of supplying when the detection means detects that the memory device is in the

connection state (line 63 of column 8 through line 6 of column 9); **and selection means for selecting one of the external devices to be supplied with power according to an operating state of a previously connected external device among the external devices when the determining means determines that the total amount of power required exceeds the amount of power that the printing apparatus is capable of supplying** (lines 50-62 of column 8 mention that the operating mode of printer is changed first, then the mode of editor and then the mode of camera. Therefore, the selection means selects the external device 109 to be supplied with low power according to the operating state of first connected device 139).

Ishikawa et al do not explicitly teach the cease of supply to previously connected external device and start of supply to the newly connected external device among the external devices for the first two embodiments.

However, the third embodiment of Ishikawa et al described in columns 9-13 and fifth embodiment described in column 17-26 disclose a power control system that can be adopted in first and second embodiments. In these embodiments, Ishikawa teaches **“after the previously-connected external device enters an idle state, the selection means sets a flag, controls power supply to previously connected external device and starts power supply to the memory device** (line 65 of column 10 through line 2 of column 11 teach that the change in power consumption mode depends on priority and mode of each device. Therefore, power supply to a previously connected device

with lower priority and idle mode operating condition can be ceased to power a high priority newly added device. Fig 11 and Fig 15 describe the addition of newly added device. The newly added device or adapter is started with power by changing the mode of previously connected device as explained in lines 1-12 of column 15. In that way a previously connected device can now be in sleep mode and a newly connected device is added to the system. Lines 1-10 of column 12 mentions that controller 1 sets the power consumption modes by sending a power control signal to each device and the devices makes preparations to transit to the power consumption mode. The preparation for mode transition is equivalent to entering an idle state. After completion of preparation, controller changes the modes of the devices (lines 10-15 of column 12). The changing of mode is equivalent to setting of flag. Thus, the low priority previously connected device enters into (i.e., finishes preparation for mode transition) an idle state (i.e., sleep mode) and controller sets flag that the device has changed its mode; **and wherein after having accessed the memory device through the memory device interface, the selection means re-starts power supply to the previously-connected external device based on a value set in the flag** (lines 38-60 of column 12) mentions that a device can shift itself to sleep mode and a device can send power request signal to set the power consumption mode. Therefore, it is possible that previously connected device sends a power request to controller and change its power mode. As change in power mode depends on previous mode (lines 1-2 of column 11) the controller restarts the power supply to the low priority previously connected device

based on the flag (i.e., mode previously set) when sum of current falls within allowable range).

Ishikawa does not describe how to shut off the power supply to the older devices, although Ishikawa controls the devices based on priority. However claim does not require shutting off the previously-connected device as claim language "stops power supply" does not require complete stopping of power supply. Partial stop of power supply meets the claim limitations. Ishikawa's sleep mode comprises partial stop of power supply (lines 55-60 of column 11). Although Ishikawa's system teaches the limitation "stops power supply to the previously-connected external device", Examiner cites Kim for better explanation of scenario.

Kim teaches a system where each of the connected devices can be individually turned off based on data analysis. Therefore, idle device is turned off and the second device could be restarted based on data signal. It is possible that first device is first connected and second device is later connected.

It would have been obvious for one ordinary skill in the art at the time the invention was made to combine the teachings of embodiments in Ishikawa and Kim, as the third embodiment of Ishikawa basically teaches the power control that can be adopted by first and second embodiments and fifth embodiments teaches how the devices can be connected with 1394 standard. One ordinary skill would be motivated to incorporate the

power management as disclosed in third embodiment and device tree disclosed in fifth embodiment as they provide the effective way of power management and adding new device in a system. One ordinary skill in the art would have been motivated to have start/stop feature of Kim in the system of Ishikawa to implement the improved power control feature.

Ishikawa or Kim does not mention about memory card required by the claimed invention. Carman teaches a system where memory card is a 1394 compatible device (lines 35-45 of column 2). Therefore, the memory device of 1394 bus in Ishikawa can be a memory card. ~~Such a memory card provides easy replacement and maintenance.~~

For claim 3, Kim's system restarts any device that is not idle and stops the device that is disconnected/idle. Therefore, the first connected device can be restarted if data detector detects data on the line.

For claim 5, the embodiment of Fig 5 does not provide user selection means. However, embodiment of Fig 9 provides a plurality of devices, which are controlled based on priority set beforehand (lines 65-67 of column 10). As the setting of priority typically requires user selection of the devices, the selection means comprises user selection means.

It would have been obvious for an ordinary skill in the art at the time the invention was made to have user selection means in the embodiment of Fig 5, as that would provide the complete control over the devices.

For claim 6, interface means of Ishikawa comprises different specification as 109 and 139 are two different devices.

For claims 7 and 8, Ishikawa et al do not mention about USB and memory card interface. Examiner takes an official notice that USB and memory card interface is well known in the art. One ordinary skill in the art would be motivated to use USB for it's increased speed, memory card interface for increased storage.

For claim 9, the embodiment of Fig 5 does not provide 1394 interface. However 5th embodiment (lines 5-10 of column 17) provides 1394 interface. One ordinary skill in the art would be motivated to use such interface in the embodiment of Fig 5 for increased speed.

For claim 11, Ishikawa et al teach the following limitations:

A power supply control method in a printing apparatus (Fig 6) provided with a plurality of interface means (the three 150s) connectable to external devices (139 and 109) adapted to store image data and operated by power supplied from the printing apparatus, with at least one of the plurality of interface means including a

memory interface and at least one of the external devices including a memory
(139 comprises memory to store image and the interface of 139 is therefore memory interface), **the method comprising the steps of:**

- **detecting a connection state of the external devices to the respectively plurality of interface means** (lines 31-50 of column 8);
- **determining whether or not a total amount of power that the plurality of external devices demands exceeds an amount of power that the printing apparatus is capable of supplying when the detection means detects that the memory device is connected** (line 63 of column 8 through line 6 of column 9);
- **selecting an external device to be supplied with power according to an operating state of a first-connected external device when the determining means determines that the total amount of power required exceeds the amount of power that the printing apparatus is capable of supplying** (lines 50-62 of column 8 mention that the operating mode of printer is changed first, then the mode of editor and then the mode of camera. Therefore, the selection means selects the external device 109 to be supplied with power according to the operating state of first connected device 139).

Ishikawa et al do not explicitly teach the complete cease of supply to previously connected external device and start of supply to the newly connected external device among the external devices for the first two embodiments.

However, the third embodiment of Ishikawa et al described in columns 9-13 and fifth embodiment described in column 17-26 disclose a power control system that can be adopted in first and second embodiments. In these embodiments, Ishikawa teaches **“after the previously-connected external device enters an idle state, the selection means sets a flag, controls power supply to previously connected external device and starts power supply to the memory device** (line 65 of column 10 through line 2 of column 11 teach that the change in power consumption mode depends on priority and mode of each device. Therefore, power supply to a previously connected device with lower priority and idle mode operating condition can be ceased to power a high priority newly added device. Fig 11 and Fig 15 describe the addition of newly added device. The newly added device or adapter is started with power by changing the mode of previously connected device as explained in lines 1-12 of column 15. In that way a previously connected device that was in idle mode can be now shut off and a newly connected device is added to the system. Lines 1-10 of column 12 mentions that controller 1 sets the power consumption modes by sending a power control signal to each device and the devices makes preparations to transit to the power consumption mode. The preparation for mode transition is equivalent to entering an idle state. After completion of preparation, controller changes the modes of the devices (lines 10-15 of column 12). The changing of mode is equivalent to setting of flag. Thus, the low priority previously connected device enters into (i.e., finishes preparation for mode transition) an idle state (i.e., sleep mode) and controller sets flag that the device has changed its

mode); and wherein after having accessed the memory device through the memory device interface, the selection means re-starts power supply to the previously-connected external device based on a value set in the flag (lines 38-60 of column 12 mentions that a device can shift itself to sleep mode and a device can send power request signal to set the power consumption mode. Therefore, it is possible that previously connected device sends a power request to controller and change its power mode. As change in power mode depends on previous mode (lines 1-2 of column 11) the controller restarts the power supply to the low priority previously connected device based on the flag (i.e., mode previously set) when sum of current falls within allowable range).

Ishikawa does not describe how to shut off the power supply to the older devices, although Ishikawa controls the devices based on priority. However claim does not require shutting off the previously-connected device as claim language “stops power supply” does not require complete stopping of power supply. Partial stop of power supply meets the claim limitations. Ishikawa’s sleep mode comprises partial stop of power supply (lines 55-60 of column 11). Although Ishikawa’s system teaches the limitation “stops power supply to the previously-connected external device”, Examiner cites Kim for better explanation of scenario.

Ishikawa does not mention about memory card.

Kim teaches a system where each of the connected devices can be individually turned off based on data analysis. Therefore, idle device is turned off and the second device could be restarted based on data signal. It is possible that first device is first connected and second device is later connected.

It would have been obvious for one ordinary skill in the art at the time the invention was made to combine the teachings of embodiments in Ishikawa and Kim, as the third embodiment of Ishikawa basically teaches the power control that can be adopted by first and second embodiments and fifth embodiments teaches how the devices can be connected with 1394 standard. One ordinary skill would be motivated to incorporate the power management as disclosed in third embodiment and device tree disclosed in fifth embodiment as they provide the effective way of power management and adding new device in a system. One ordinary skill in the art would have been motivated to have start/stop feature of Kim in the system of Ishikawa to implement the improved power control feature.

Ishikawa or Kim does not mention about memory card. Carman teaches a system where memory card is a 1394 compatible device (lines 35-45 of column 2). Therefore, the memory device of 1394 bus in Ishikawa can be a memory card ^{in the system}. Such a memory card provides easy replacement and maintenance.

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 5-11 have been considered but are moot in view of the new ground(s) of rejection. As Ishikawa is still relied upon for rejection, Examiner is addressing arguments relevant to Ishikawa.

Applicant argues that Ishikawa does not teach or suggest that the selection means sets a flag, stops power supply to the previously-connected external device and starts power supply to the memory card, and after having accessed the memory card, the power supply is restarted to the previously connected external device based on a value set in the flag.

Examiner disagrees. Lines 40-45 of column 15 of Ishikawa mentions that controller checks the current value of each device and control current drain of each device in such a manner that the supplied current will always be less than the limit value. Besides, line 65 of column 10 through line 2 of column 11 of Ishikawa teaches that the mode change depends on priority of devices and mode of the devices. Therefore, for a high priority newly connected device, controller is likely to stop a low priority previously connected device when it enters an idle state. Lines 1-10 of column 12 of Ishikawa mentions that controller 1 sets the power consumption modes by sending a power control signal to each device and the devices makes preparations to transit to the power consumption mode. The preparation for mode transition is equivalent to entering the device into an idle state. After completion of preparation, controller changes the modes of the devices

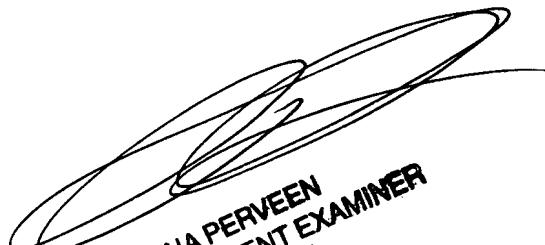
(lines 10-15 of column 12). The changing of mode of the device is equivalent to setting of flag. Thus, the low priority previously connected device enters into (i.e., finishes preparation for mode transition) an idle state (i.e., sleep mode) and controller sets flag representing that the device has changed its mode. Kim disclosed stopping of supply to an idle device and starting of supply to an active device. Therefore, Ishikawa, in view of Kim, teaches stopping of supply to lower priority previously connected device when it is in idle state, which includes setting of flag, and starting of supply to higher priority newly connected device. Lines 38-60 of column 12 of Ishikawa mention that a device can shift itself to sleep mode from power consumption mode and shift from sleep mode to the power consumption mode. Therefore, it is possible that previously connected idle device sends a power request to controller to change its power mode when some high priority other devices are consuming less power. In such a case, controller changes mode of the previously connected device to supply power to the previously connected device. As change in power mode depends on previous mode (lines 1-2 of column 11) the controller restarts the power supply to the low priority previously connected device based on the flag (i.e., mode previously set).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahmida Rahman whose telephone number is 571-272-8159. The examiner can normally be reached on Monday through Friday 8:30 -6:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fahmida Rahman
Examiner
Art Unit 2116



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8/20/07